

[0053]

ABSTRACT

The invention provides a compositions comprising mussel hydrolysate from Indian green mussel, e.g., *Perna viridis*. The invention further provides methods of inhibiting or preventing osteoclast formation and/or bone resorption comprising administration of mussel hydrolysate from Indian Green to an animal or human. The compositions of the invention are non-toxic to other cells. Additionally, the invention provides processes for extracting mussel hydrolysate from Indian green mussel, e.g., *Perna viridis*.